General Physics

A STUDY OF DOG PETS

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Positron Emission Tomography, better known as PET, is a noninvasive technique used to image molecular processes within a body. PET is used to image the activity of a previously injected radiotracer as it is distributed throughout the body. PET is especially useful in detecting and monitoring tumors. In this study, a PET/CT scanner was used to image malignant tumors in two dogs. The dogs were injected with the radiotracer ^{18}F-fluoro-thymidine (FLT). The images were analyzed to study the uptake of FLT from the blood stream to the tumors. Correlations between images were studied to determine the optimal imaging window. Results implied that steady uptake was achieved after 10 minutes and thus the optimal imaging window was subsequent to 10 minutes.